

# Extended Boom Fork Lift- Millennia Military Vehicle



# OVERVIEW

- **Operator Safety and Alert Symbols**
- **Characteristics and Capabilities**
- **Operator Controls**
- **Starting Procedures**
- **Stabil-TRAK**
- **Changing Attachments**
- **Load Charts**

# LEARNING OBJECTIVES

**TERMINAL LEARNING**  
**OBJECTIVES**

**ENABLING LEARNING**  
**OBJECTIVES**

# **METHOD / MEDIA**

- **Lecture, Demonstration and Practical Application Methods**
- **Student Handout**
- **Computer Aided Slides**
- **Admin Inst: IRFS**

# EVALUATION

- **ON THE 5<sup>TH</sup> TRAINING DAY  
THERE WILL BE A 25  
QUESTION WRITTEN TEST**
- **PRACTICAL APPLICATION  
TEST**

# SAFETY IS...



- **Admin Inst: ORAW**

# Operator Safety and Alert Symbols

The safety alert symbol is used with different words to attract your attention to messages found within the manual and on hazard decals located on the vehicle.



# Operator Safety and Alert Symbols

- **SAFETY CLASSIFICATIONS**

**Danger** - (With Safety Alert Symbol) This word indicates an imminently hazardous situation which, if not avoided, will result in death or serious personal injury.



# Operator Safety and Alert Symbols

**Warning-** (With Safety Alert Symbol) This word indicates a potentially hazardous situation which, if not avoided, could result in death or serious personal injury.

# Operator Safety and Alert Symbols

**Caution-** (With Safety Alert Symbol) This word indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

# Operator Safety and Alert Symbols

**Caution-** This word without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, may result in property damage.

# Operator Safety and Alert Symbols

## Operator Safety:

- (1) Fasten safety belt
- (2) Make sure controls are in neutral
- (3) Apply park brake and neutral lock before starting engine.

# Operator Safety and Alert Symbols

(4) NO PASSENGERS

(5) Stay clear of pinch points

(6) KEEP HANDS AND FEET IN CAB  
WHILE OPERATING.

# Operator Safety and Alert Symbols

(7) 360 walk-around

(8) 3 points of contact

(9) Ground all attachments

(10) Caution must be taken on slopes especially on sloped terrain when using frame sway

# Operator Safety and Alert Symbols

(11) Look in the direction of travel

(12) Hearing protection required

(13) Bulky Loads; Reverse, slow, 12-18 inches

# Characteristics and Capabilities

- **Weight**

- 26,900 lbs. W/out attachments

- **Maximum lifting capacity**

- Type I Forks - 11,000 lbs. 24" Load center

- Type II Forks - 7,000 lbs. 48" Load center



# ATTACHMENTS



Type II (7,000lbs)

Type I (11,000lbs)

# Characteristics and Capabilities

- **Maximum Lifting Height:**
  - 42'4"
- **Maximum reach:**
  - 30' (front of tires to fork tines)
- **Fuel Capacity:**
  - 50 Gal

# Characteristics and Capabilities

- 24 volt negative ground electrical system
- **Engine:** Cummins turbo diesel
  - 4.5L, 110HP @ 2500 RPM
  - 15w40 OE

# Characteristics and Capabilities

- **Transmission:**

- 4 gears forward, 3 gears reverse
- Maximum speed 20 MPH forward
- 10w oil

- **Hydraulic System:**

- 41.3 gal capacity
- 10w oil

- **Maximum fording depth of 36''**

**QUESTIONS?**

# OPERATOR CONTROLS



# OPERATOR CONTROLS



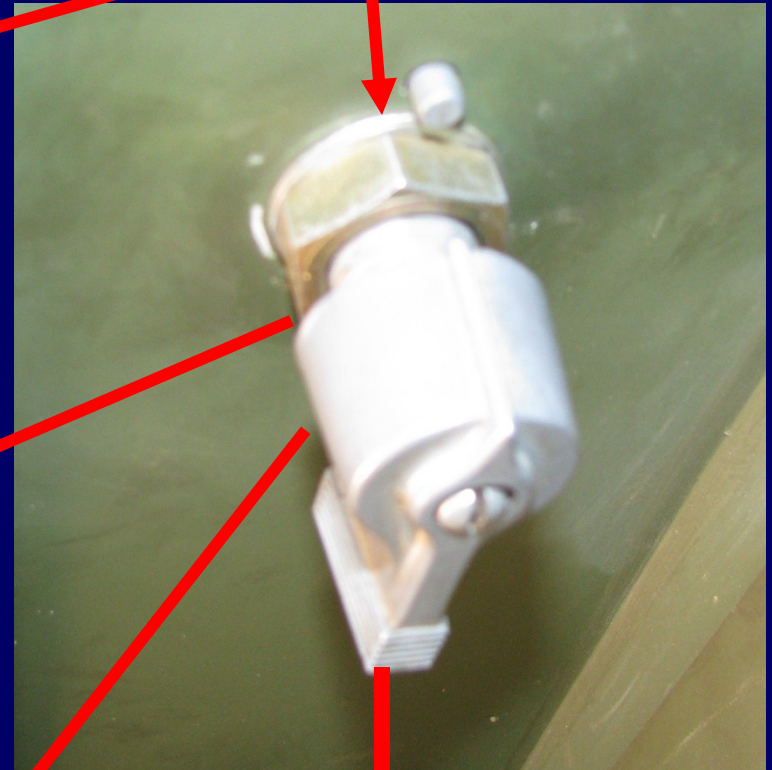


# OPERATOR CONTROLS



START

Ignition  
switch



RUN

OFF



# OPERATOR CONTROLS

## left side display panel

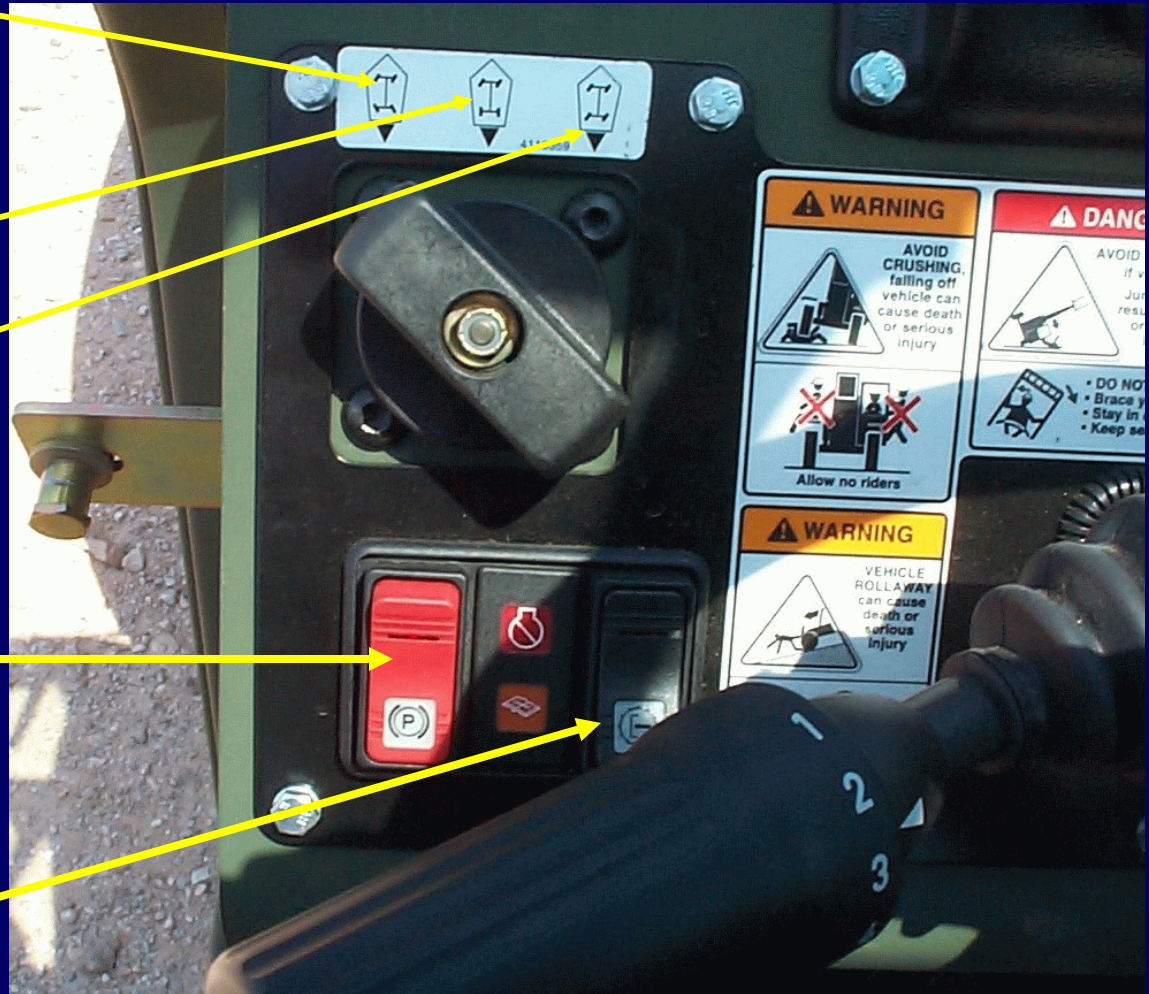
Four Wheel

Front  
Wheel

Crab

Park Brake

De-Clutch  
Switch



# OPERATOR CONTROLS

## Neutral Lock Lever





# OPERATOR CONTROLS

## Travel Selector Lever



# OPERATOR CONTROLS

## Attachment Tilt Mode Switch

( Right side of display panel )

Allows the operator to  
chose between the  
Lift/Lower function and  
the Extend/Retract  
function



# OPERATOR CONTROLS

- **Multi-Function Joystick**



- Boom Movement
- Attachment Tilt
- Frame Sway



# OPERATOR CONTROLS

## Fork Shift Control Switches



Right  
Fork

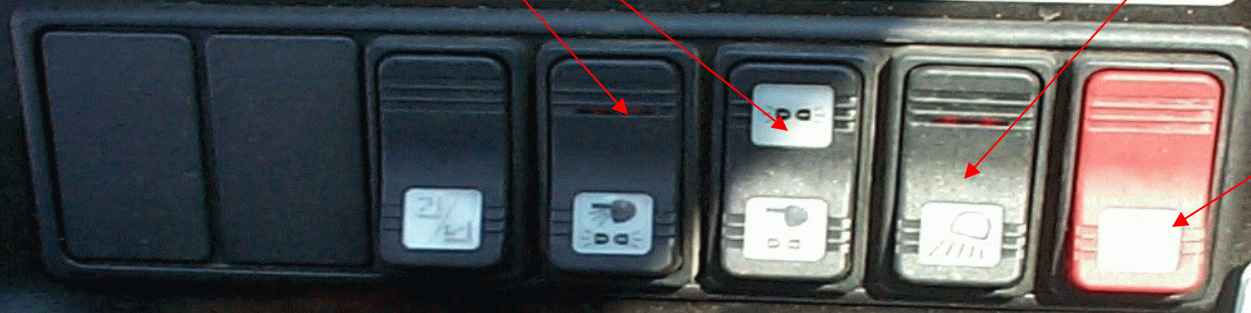
Left Fork

# RIGHT SIDE DASH CONT.

**Blackout  
Lights**

**Work Light**

**Hazards**



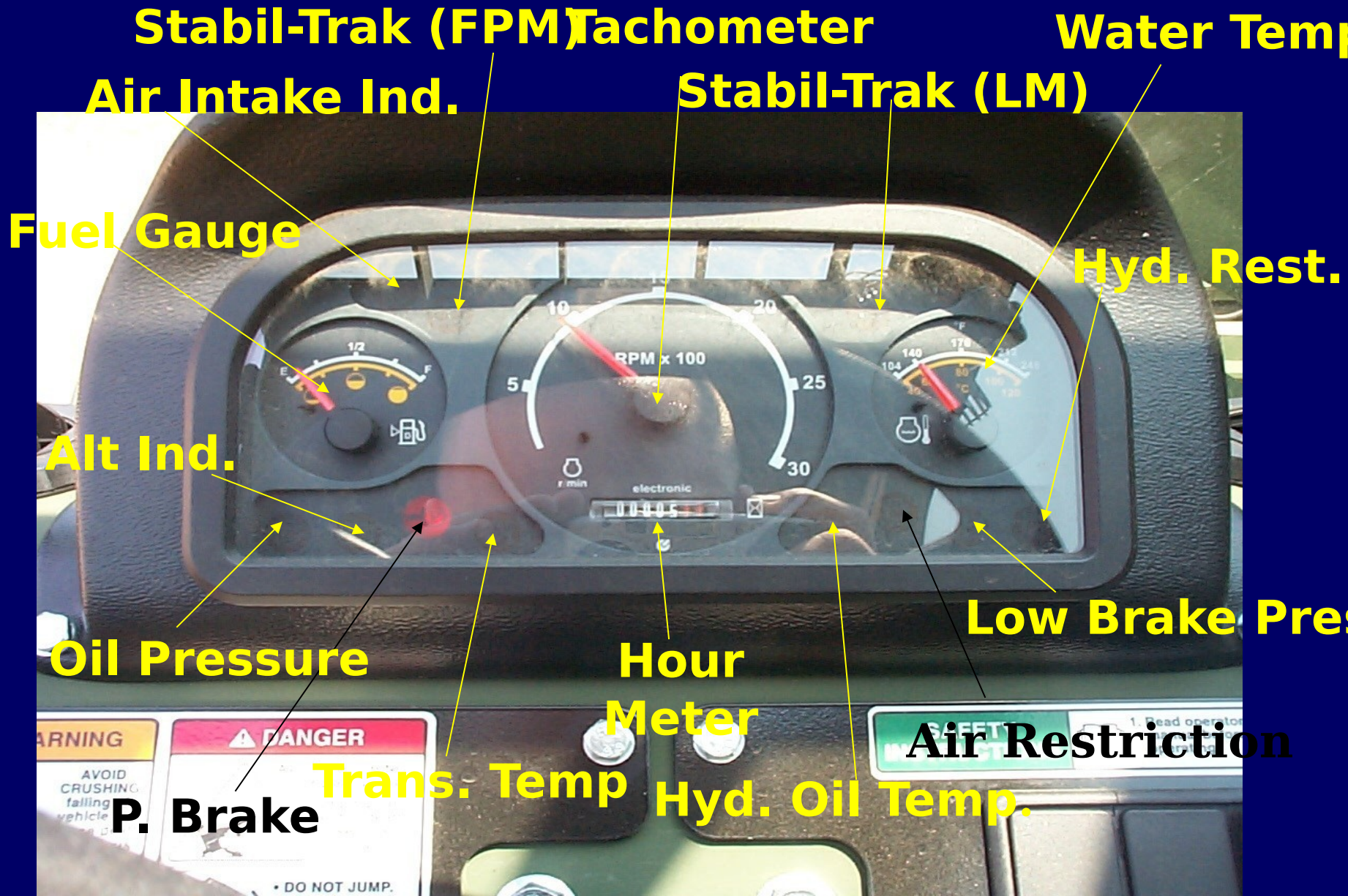
**Head Lights**

**Wipers**





# OPERATORS DISPLAY PANEL





**QUESTIONS?**

# OPERATOR INDICATORS

## Frame Level Indicator



- Mounted on the top inside of the cab

- Allows operator to tell if the vehicle has been positioned in a level condition

# OPERATOR INDICATORS

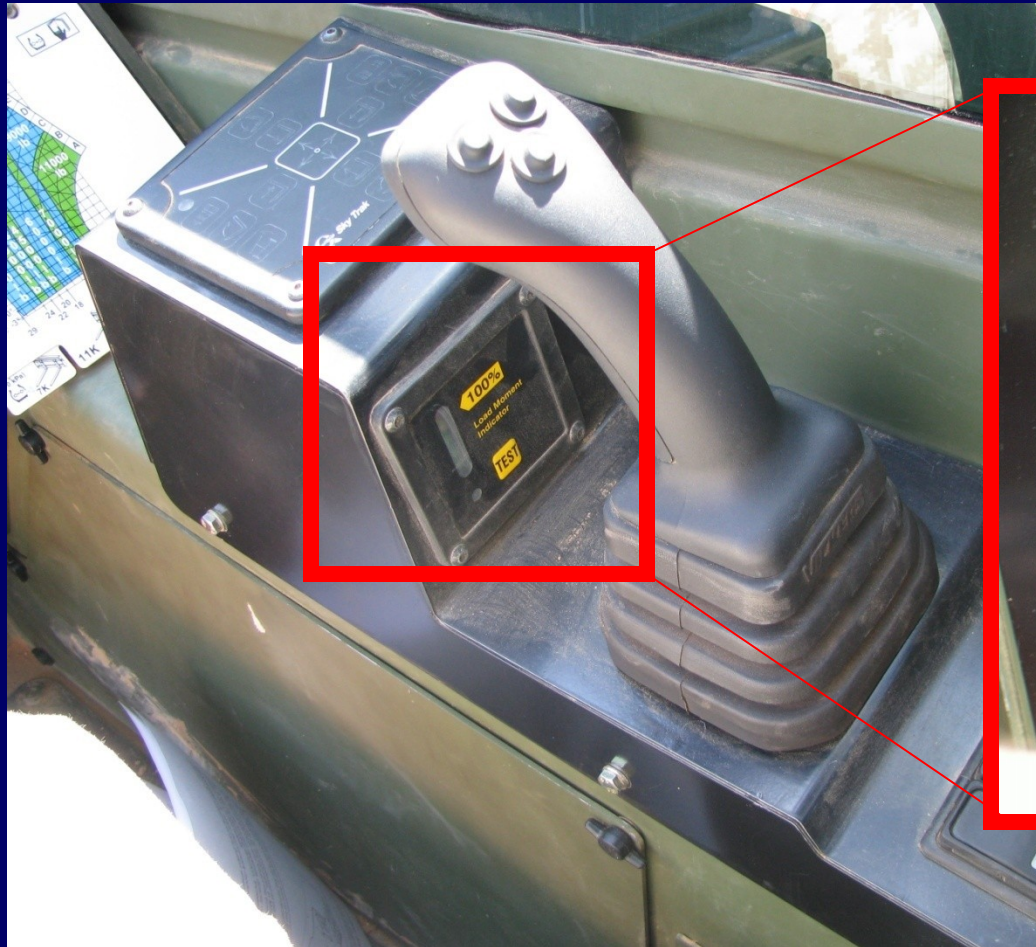
## Boom Angle Indicator



- Located on the left side of the boom
- Used to determine the boom angle when reading capacity chart

# OPERATOR INDICATORS

## Load Moment Indicator ( LMI )





# OPERATOR INDICATORS

## Load Moment

- **Green power light indicator**

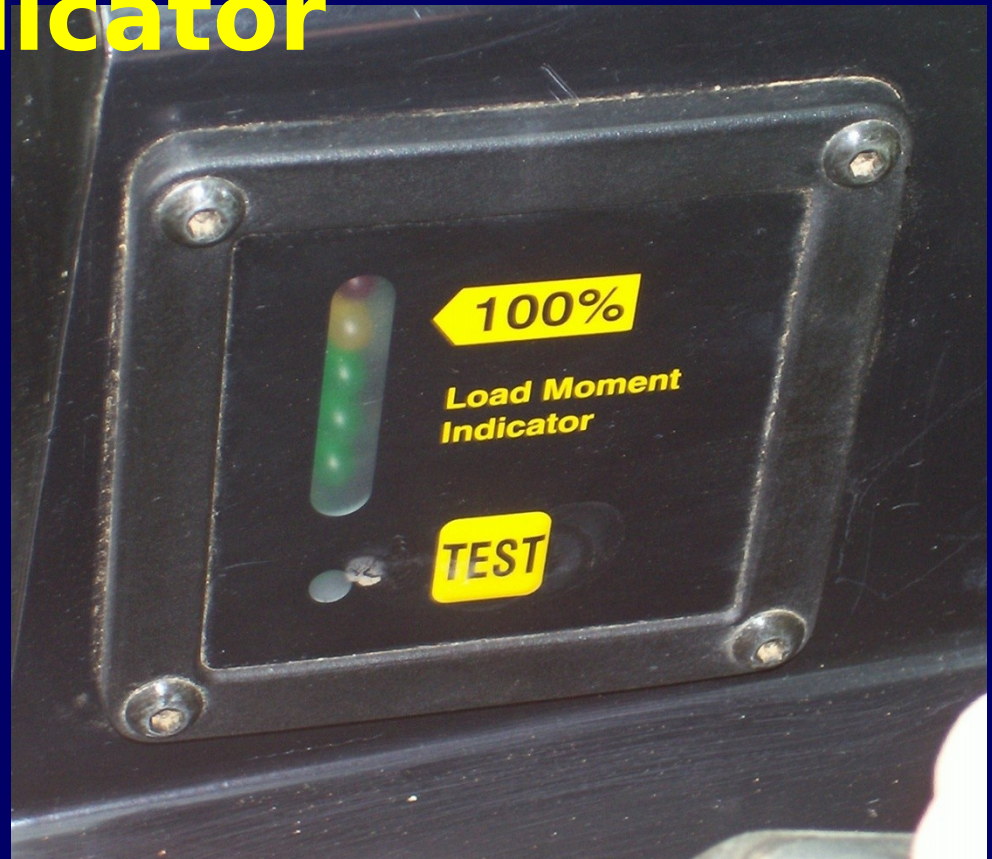
- System Active

- **Load reaches 100%**

- 3 green lights lit
- 1 amber will flash

- **Over 100%**

- Red light lit
- Audible alarm will sound



# OPERATOR INDICATORS

## **Load Moment Indicator**

- **Display Settings ( 4 )**
  - Full Brightness w/ Full Volume
  - Full Brightness w/ Muted Volume
  - Dim Brightness w/ Full Volume
  - Dim Brightness w/ Muted Volume

**QUESTIONS?**

# STARTING PROCEDURES

## NORMAL STARTING

- Engage parking brake
- Travel Selector Lever in neutral
- Neutral Lock Lever in locked position
- Push and turn ignition switch to start position. Do not crank for more than 30 seconds

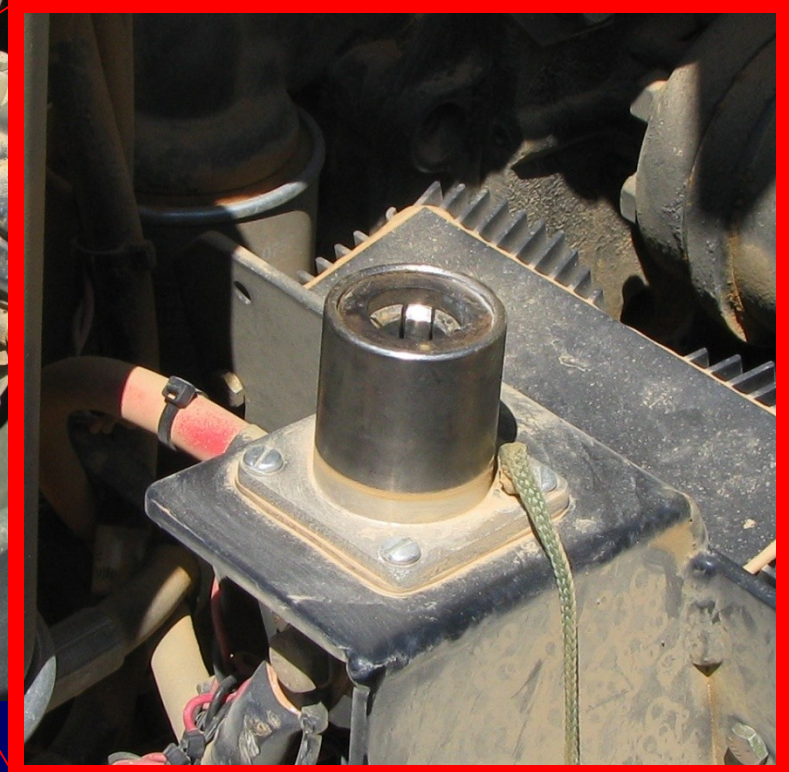
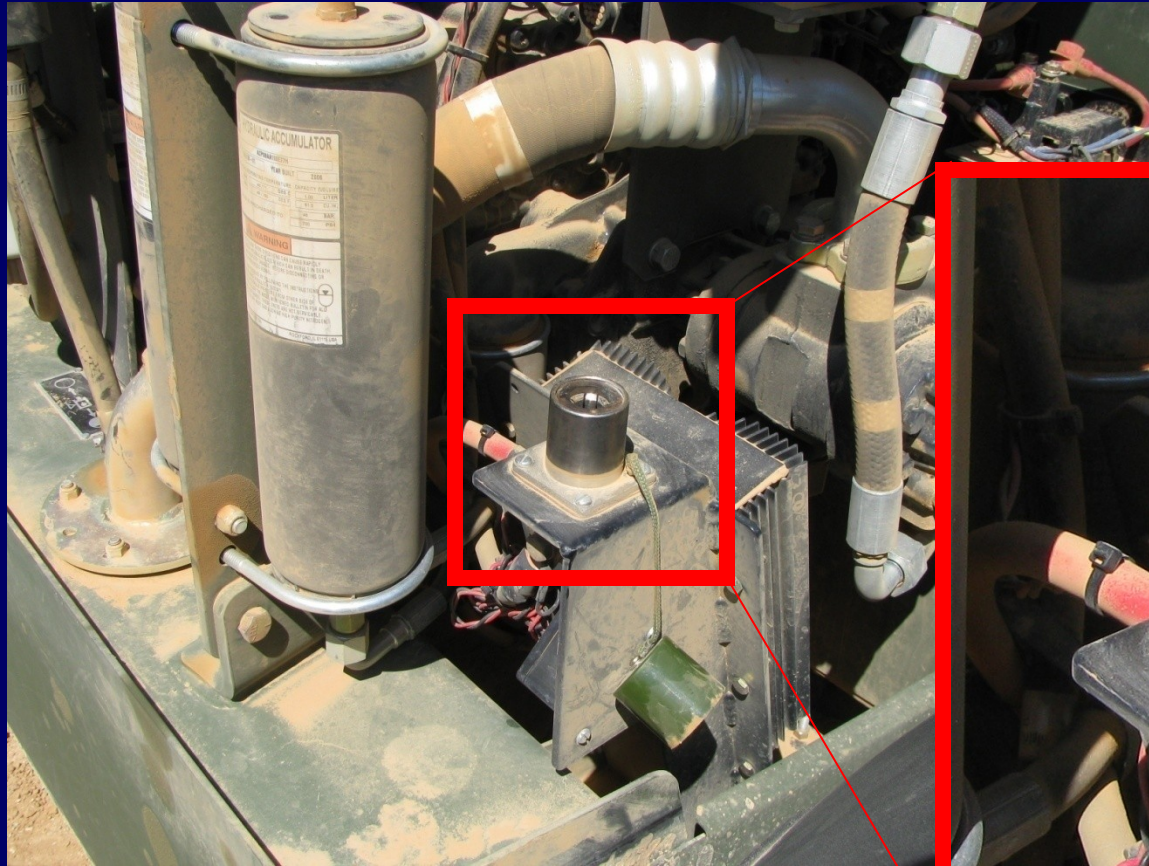


# STARTING PROCEDURES

## Slave Starting:

- Connect slave cables to booster vehicle, then to the disabled vehicle.
- Run booster vehicle just above idle.
- Follow normal starting procedures.

# STARTING PROCEDURES



# Stabil-TRAK

- **Free Pivot Mode**
- **Final Positioning Mode**
- **Locked Mode**

# Free Pivot Mode

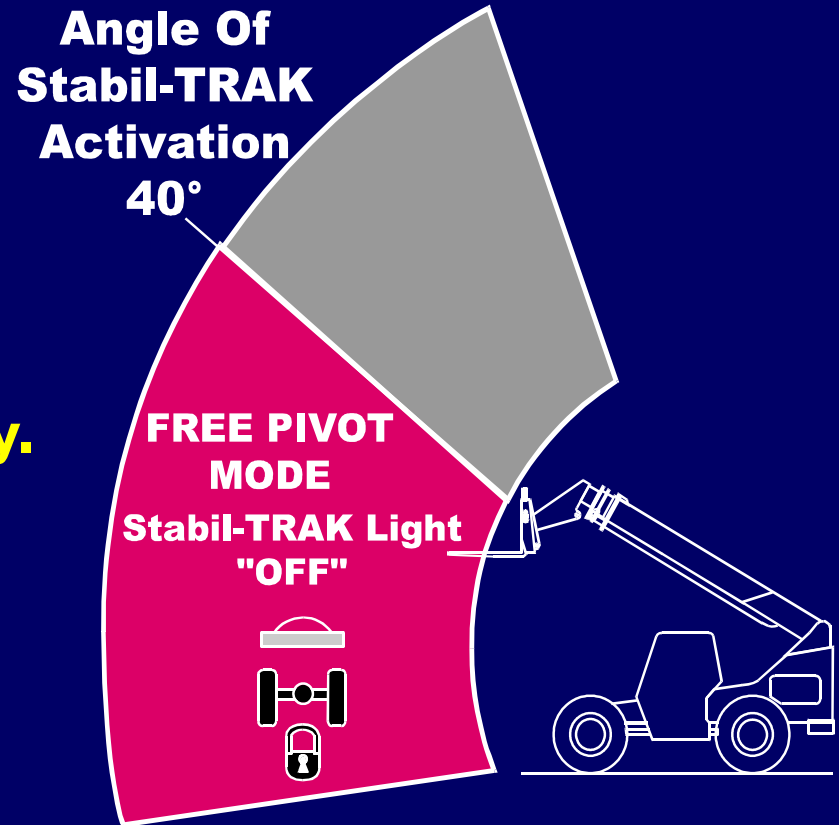
**Stabil-TRAK®**

Free Pivot Mode

**Boom Angles Below 40°.**

**Rear axle allowed to pivot freely.**

**Frame Sway operates normally**



# Locked Mode

## Stabil-TRAK®

### Locked Mode

**Boom Angles Above 40°.**  
**Rear axle locked**  
**RIGID with the frame.**

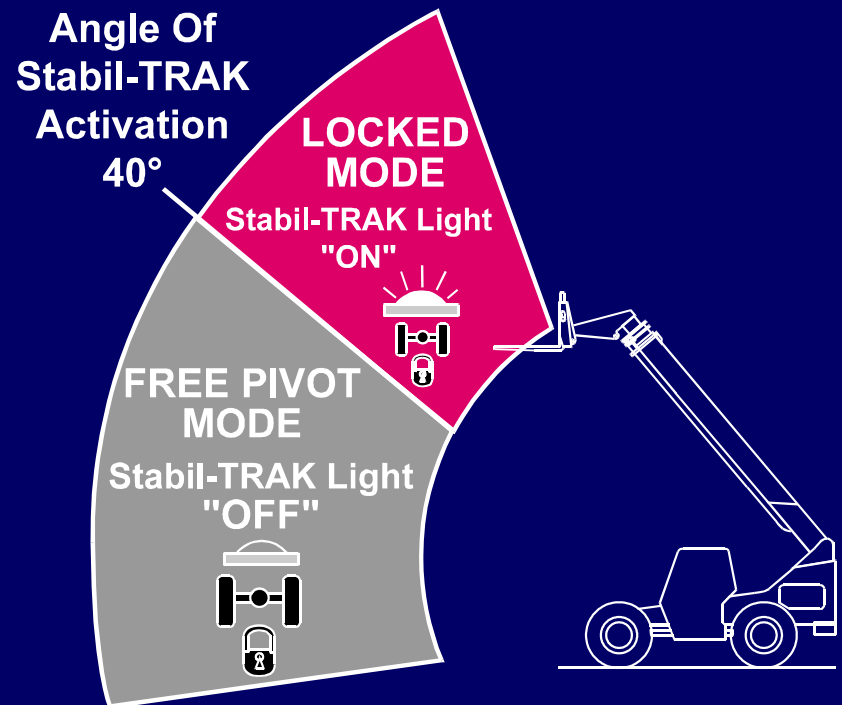
Activated by one or more  
of these functions:

**-Engaging the Emergency Park  
Break**

**-Placing Travel Select Lever  
in NEUTRAL**

**-Depressing and holding the  
Service Brake Pedal**

**Frame sway will operate slowly.**



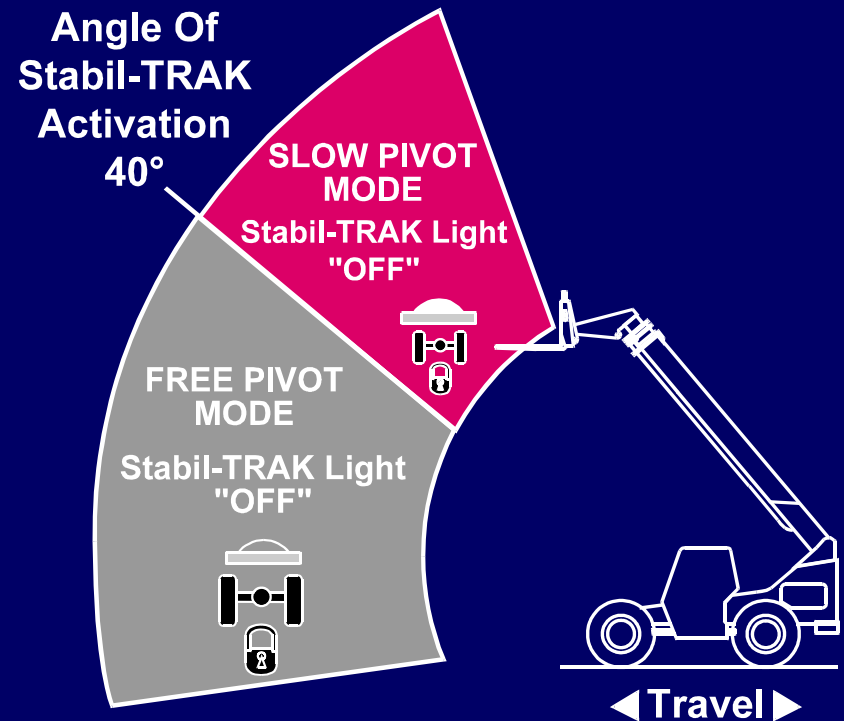
# Slow/Final Positioning Mode

## Stabil-TRAK®

Final Positioning Mode  
**Boom Angles Above 40°  
With Vehicle Traveling.**

**Rear axle is unlocked  
and allowed to pivot,  
but will respond SLOWLY  
to changes in terrain.**

**Frame Sway will operate normally**



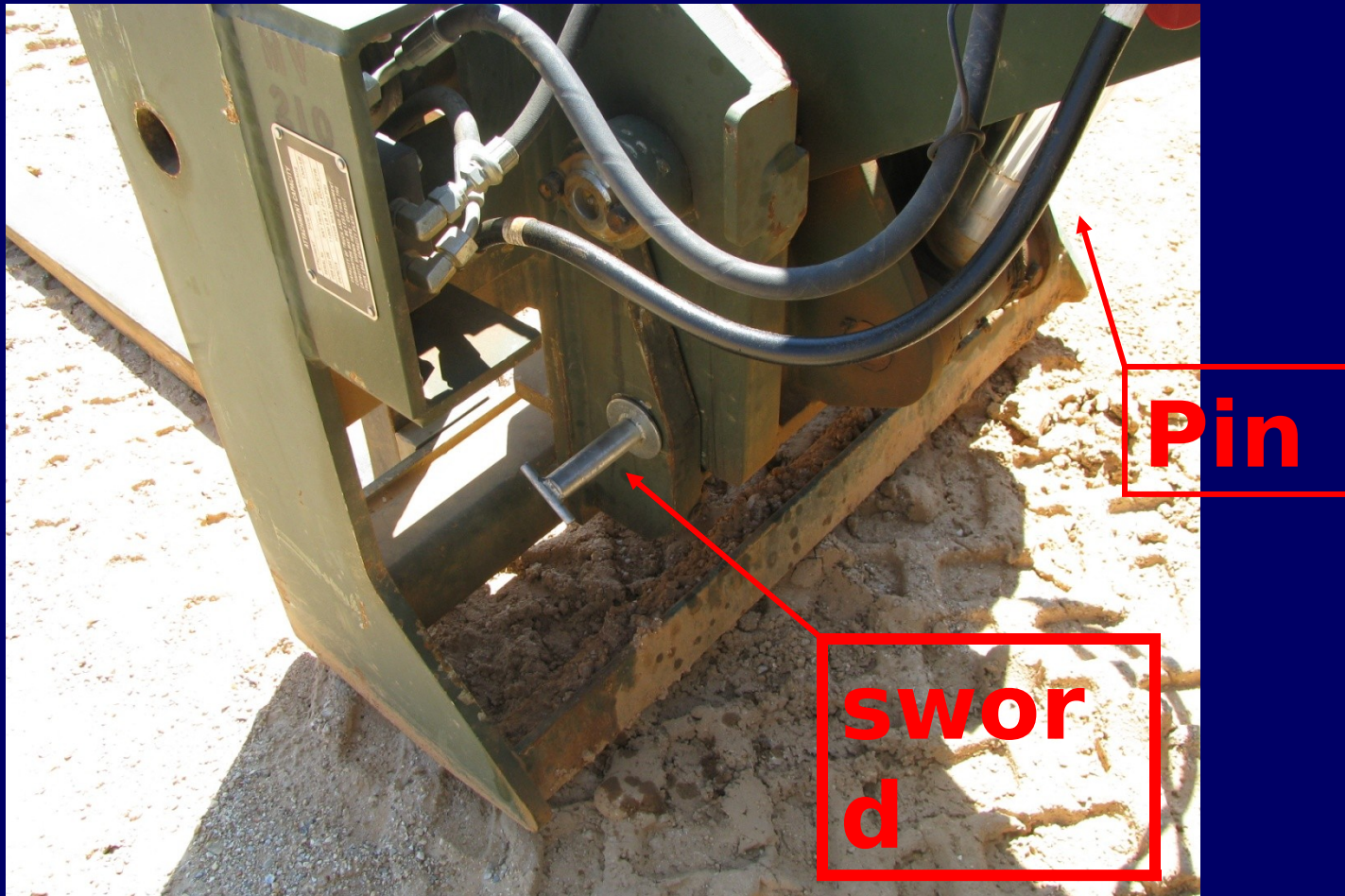
**Questions ?**

# Changing Attachments

- 1) Parkline Vehicle**
- 2) Extend 10ft, and lower to ½ inch from deck**
- 3) Shut down and Exit Vehicle**
- 4) Remove the Sword and the Pin.**



# Changing Attachments



# Changing Attachments

- 5) Remove (4) hydraulic quick disconnects**
- 6) Install “Male” and “Female” protective caps**
- 7) Enter and start the machine and tilt the forks down**
- 8) Lower and retract the boom**
- 9) Perform in reverse order to apply new attachment**

# Changing Attachments

## Hydraulic Quick Disconnects



**LEFT SIDE**



**RIGHT SIDE**

# LOAD CHARTS



# Using the Load Chart

- The vehicle is equipped with two indicators that will assist the operator in determining how to accurately use the capacity chart. These indicators are:

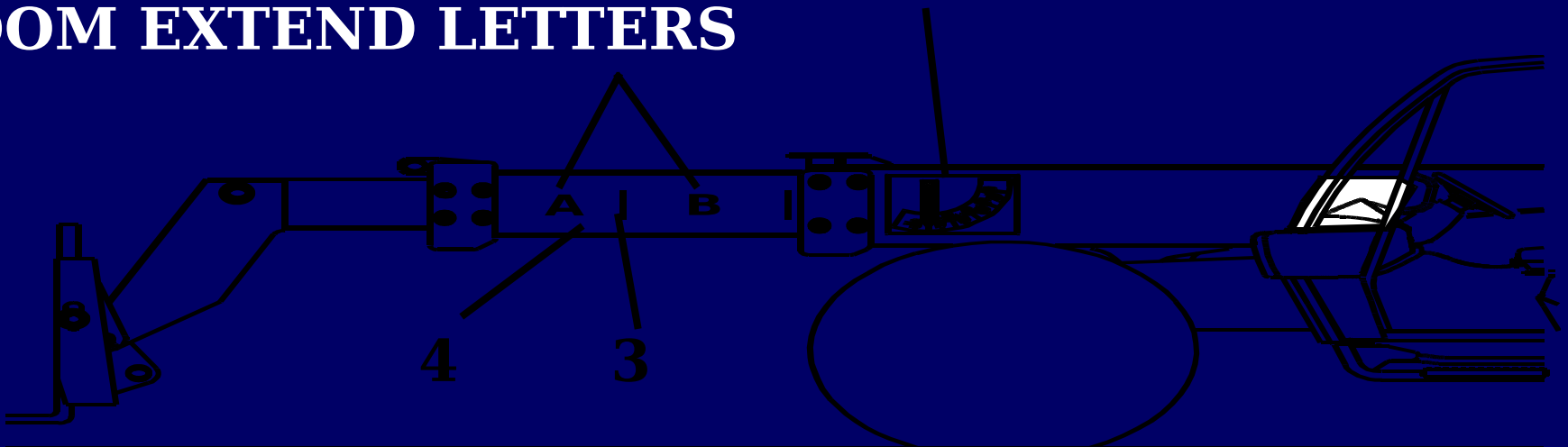
BOOM EXTEND LETTERS

BOOM ANGLE INDICATOR

- As the boom is extended, boom extend letters and vertical dividing lines (3) become visible. These letters and vertical lines indicate the point (zone) of boom extension and correspond to the capacity

BOOM ANGLE INDICATOR

BOOM EXTEND LETTERS





# LOAD CHARTS

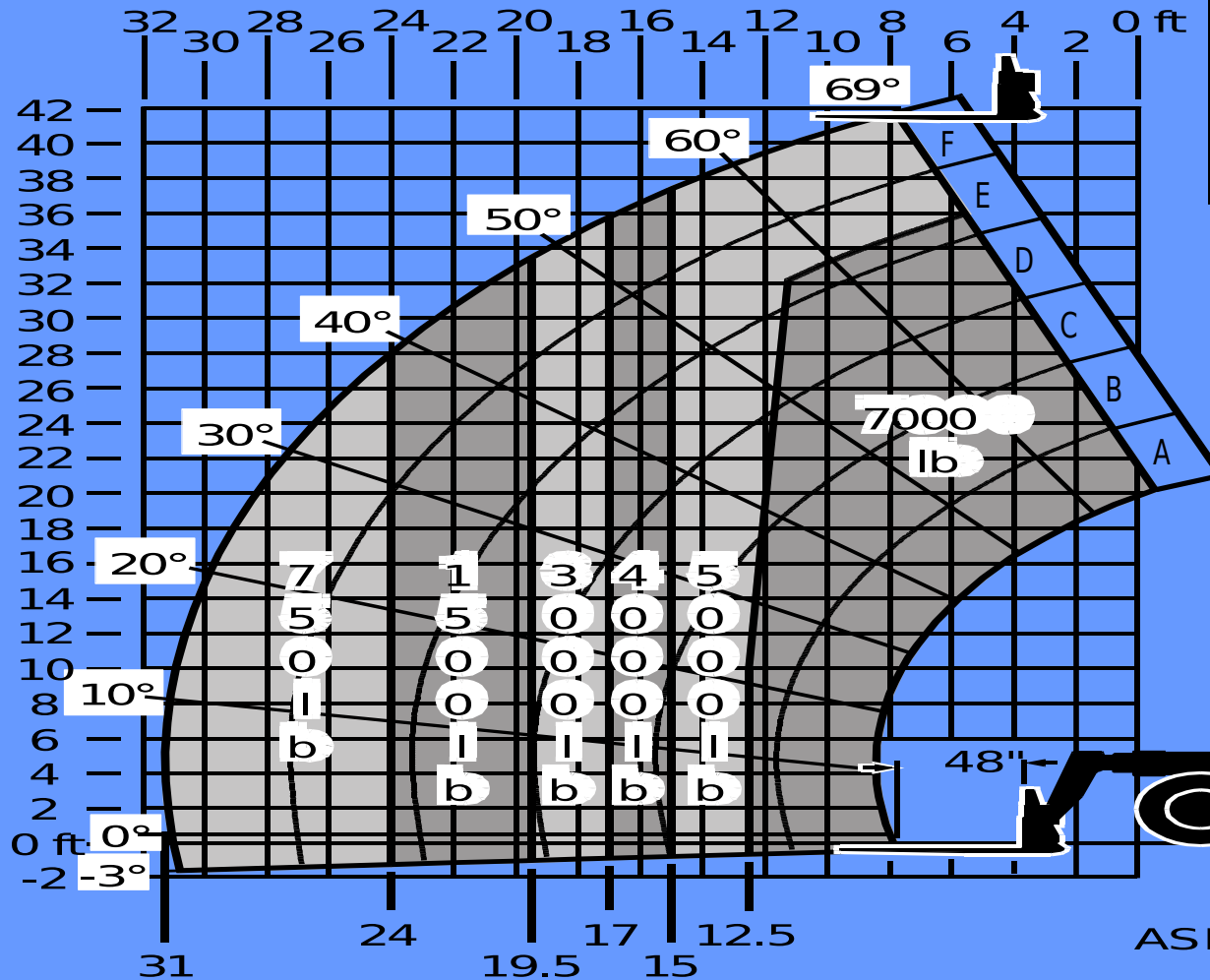
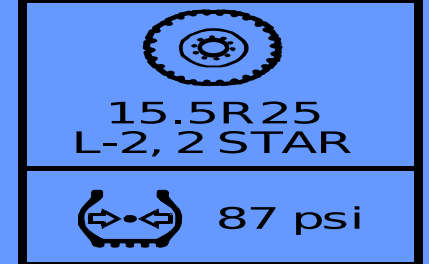
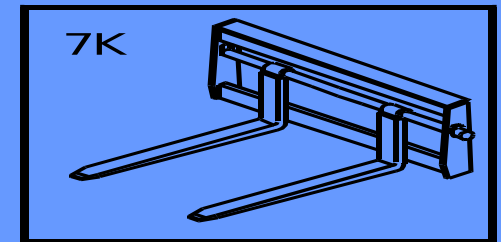


- Located on right side of Operator's Cab
- Assist the operator in load placement

# Using the Load Chart (cont.)

- To use the capacity chart, determine three important things:
  - 1. Weight of the load being lifted.
  - 2. Height of the structure where the load is to be placed.
  - 3. Distance where the load will ultimately be placed in front of the front tires.

MMV  
WITH OMNIQUIP  
48" LOAD CENTER CARRIAGE

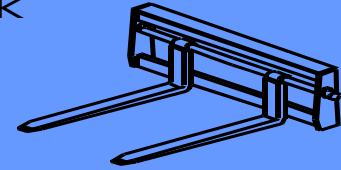


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4110338



MMV  
WITH OMNIQUIP  
24" LOAD CENTER CARRIAGE

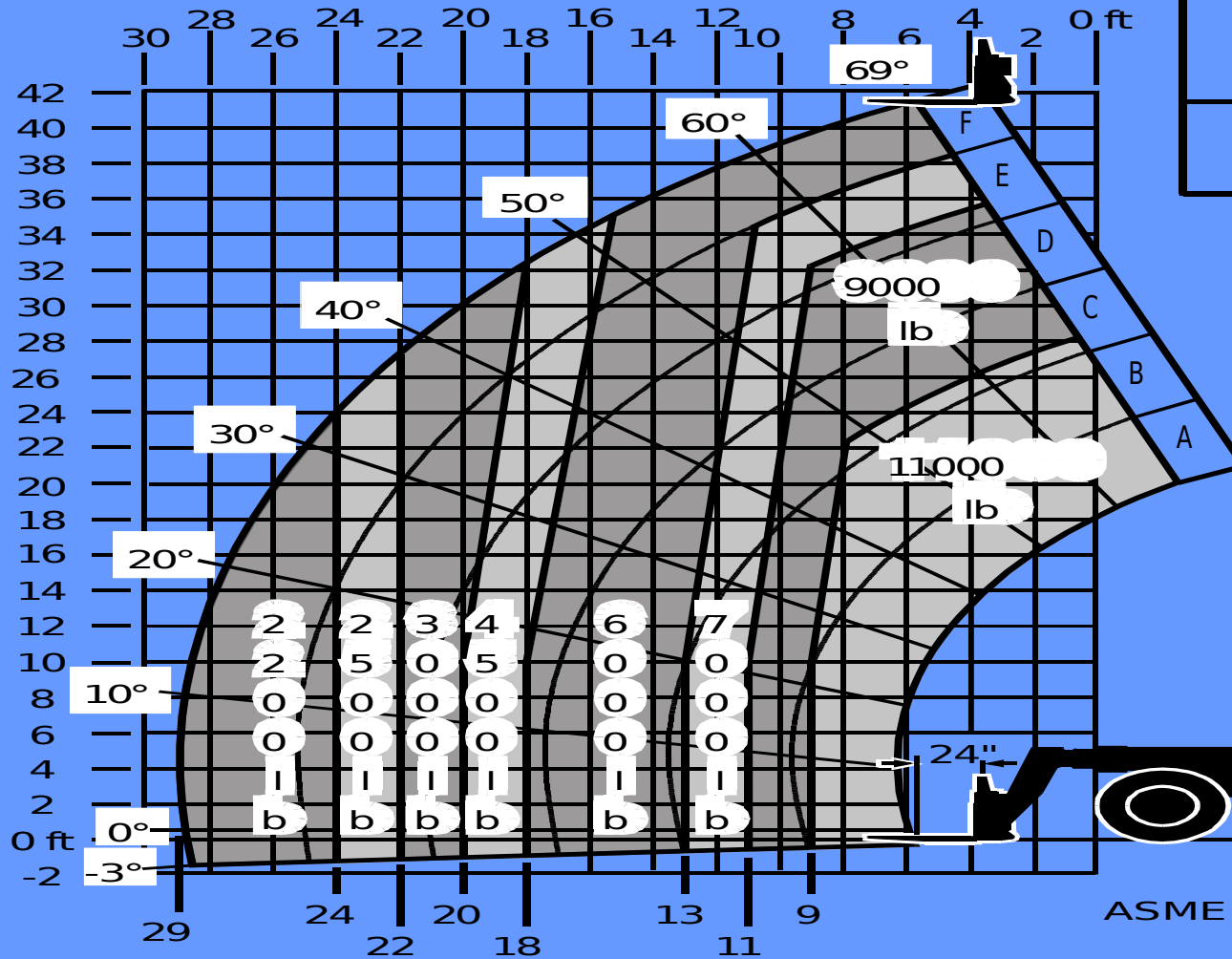
11K



15.5R25  
L-2, 2 STAR



87 psi



ASME B56.6b -1998

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**QUESTIONS?**

# Summary

- **Operator Safety and Alert Symbols**
- **Characteristics and Capabilities**
- **Operator Controls**
- **Starting Procedures**
- **Stabil-TRAK**
- **Changing Attachments**
- **Load Charts**
- **Finish all IRF's and pass them to the front**